ON THE MESOSTERNUM IN SOME NITIDULIDAE (COLEOPTERA), WITH A KEY TO THE NEW WORLD *AMPHICROSSUS*

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Abstract

The external development of the mesosternum and prosternal process is described and figured, providing useful characters for defining genera. An additional character, an area of the metasternum known as the axillary space, is also discussed and figured. As a result, *Psilopyga* Lec. is separated from *Oxycnemus* Er. and reinstated. Also *Epuraea liebecki* Pars. is redescribed and transferred to *Amphicrossus*. A key is presented for New World *Amphicrossus*.

In the course of defining certain genera in the nitidulid subfamily Nitidulinae it became evident that the external development of the mesosternum offers useful diagnostic characters which require much more explicit description than they have received.

Among nitidulid genera, in the normal position of repose, the prosternal process covers the mesosternum in varying degree, as shown in the figures. In certain genera the prosternal process is compressed apically and variably concave dorsally. Also in these genera the mesosternum is slightly (if at all) elevated. This condition is observed in *Omosita, Nitidula, Lobiopa, Soronia, Ipidia, Amphotis, Trimenus, Camptodes, Aethina, Psilopyga, Phenolia, Physosoronia, Epuraea, Stelidota, Haptoncus, and Aphenolia.* Among other genera the apex of the prosternal process is bluntly convex, and it varies dorsally from not concave to strongly concave, as in *Thalycra, Pocadius, Orthopeplus, Lasiodactylus, Cychramus, Pallodes, Pocadites, Pocadiodes, Atarphia, Teichostethus, Xenostrongylus, Cyllodes,* and *Oxycnemus. Amphicrossus* exhibits an intermediate condition.

An overlooked character is the development of the axillary space at the antero-lateral angle of the metasternum. This space is formed by a caudal marginal line of the mesocoxal cavity which is parallel to the cavity but diverges in varying degree as it approaches the metepisternum. Although the axillary space is absent in a few genera, such as *Epuraea, Pallodes, Trimenus,* and *Xenostrongylus,* it is usually present and affords a useful character for defining species. It is discussed below under the various genera.

In the course of this study *Oxycnemus* is shown to be composed of 2 distinct groups of species. For 1 group *Psilopyga* Lec. is reinstated. Also the species *Epuraea liebecki* Parsons is transferred to *Amphicrossus.*

I. Mesosternum along median line on same plane as metasternum:

Omosita (Fig. 1,2): In the genotype *colon* (L.) the longitudinal carina is usually well developed and easily seen. In *funesta* Reit. the carina is very fine. In *discoidea* (F.) the carina is obsolete and very short at anterior margin. In *depressa* (L.) no carina is evident. The axillary space (Fig. 84) is present in the above species.

Nitidula (Fig. 3,4): Not carinate in the genotype *rufipes* (L.), *bipunctata* (L.), *carnaria* (Schall.), *flavomaculata* Rossi, *ziczac* Say and with a short obsolete carina in *fusula* Gebl. A small axillary space (Fig. 85) is present in the above species.

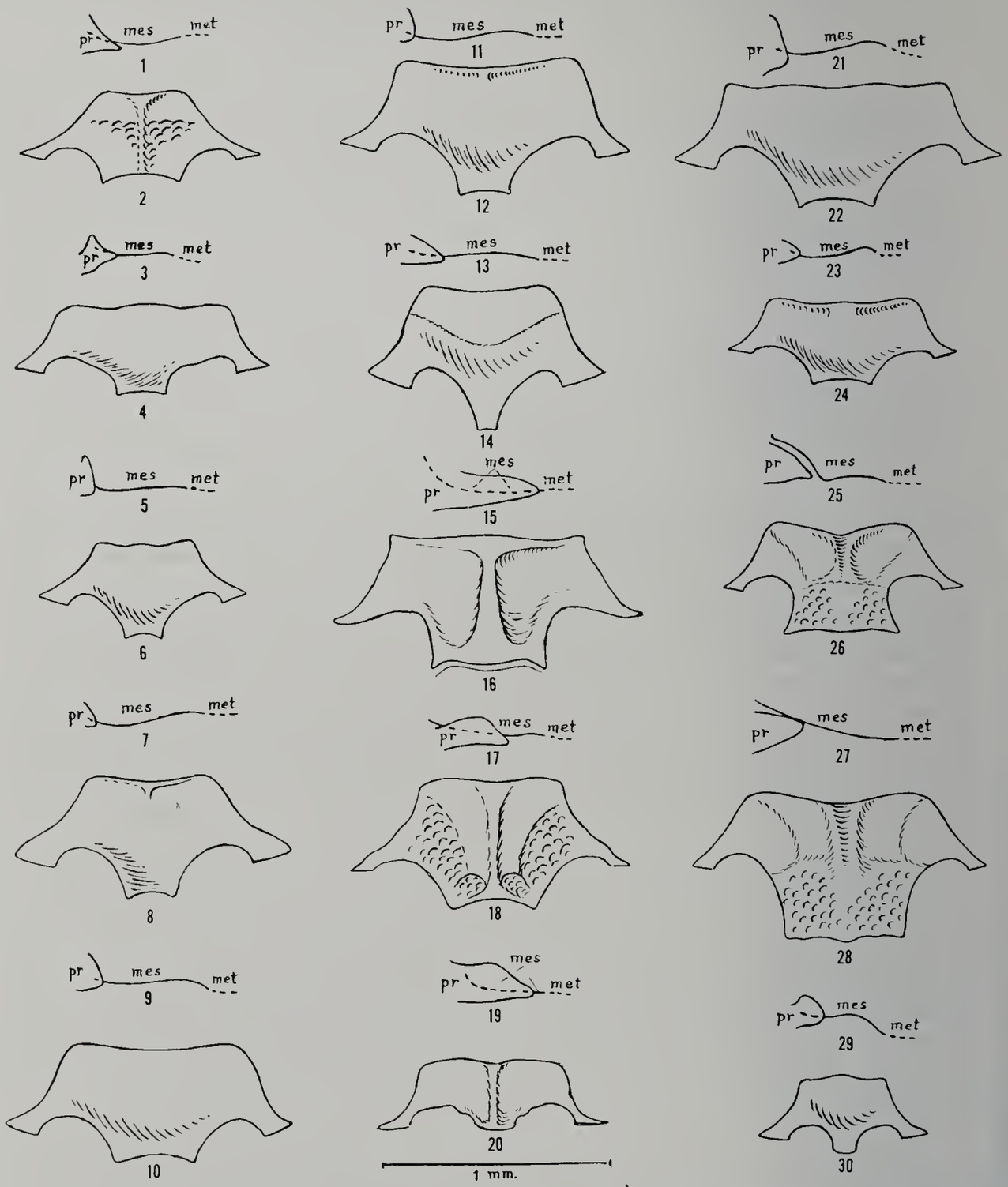

Fig. 1-30: Mesosternum in certain Nitidulidae. Odd numbers show the mesosternum in profile from the left side. Even numbers show ventral views of the mesosternum. Abbreviations as follows: mes—mesosternum, met—anterior part of the metasternum, pr—apical part of prosternal process. 1,2) *Omosita colon.* 3,4) *Nitidula bipunctata.* 5,6) *Lobiopa undulata.* 7,8) *Soronia guttulata.* 9,10) *Ipidia variolosa.* 11,12) *Amphotis ulkei.* 13,14) *Trimenus adpressus.* 15,16) *Camptodes texanus.* 17,18) *Aethina aeneipennis.* 19,20) *Psilopyga nigripennis.* 21,22) *Phenolia grossa.* 23,24) *Physosoronia explanata.* 25,26) *Amphicrossus ciliatus.* 27,28) *Amphicrossus liebecki.* 29,30) *Epuraea avara.*

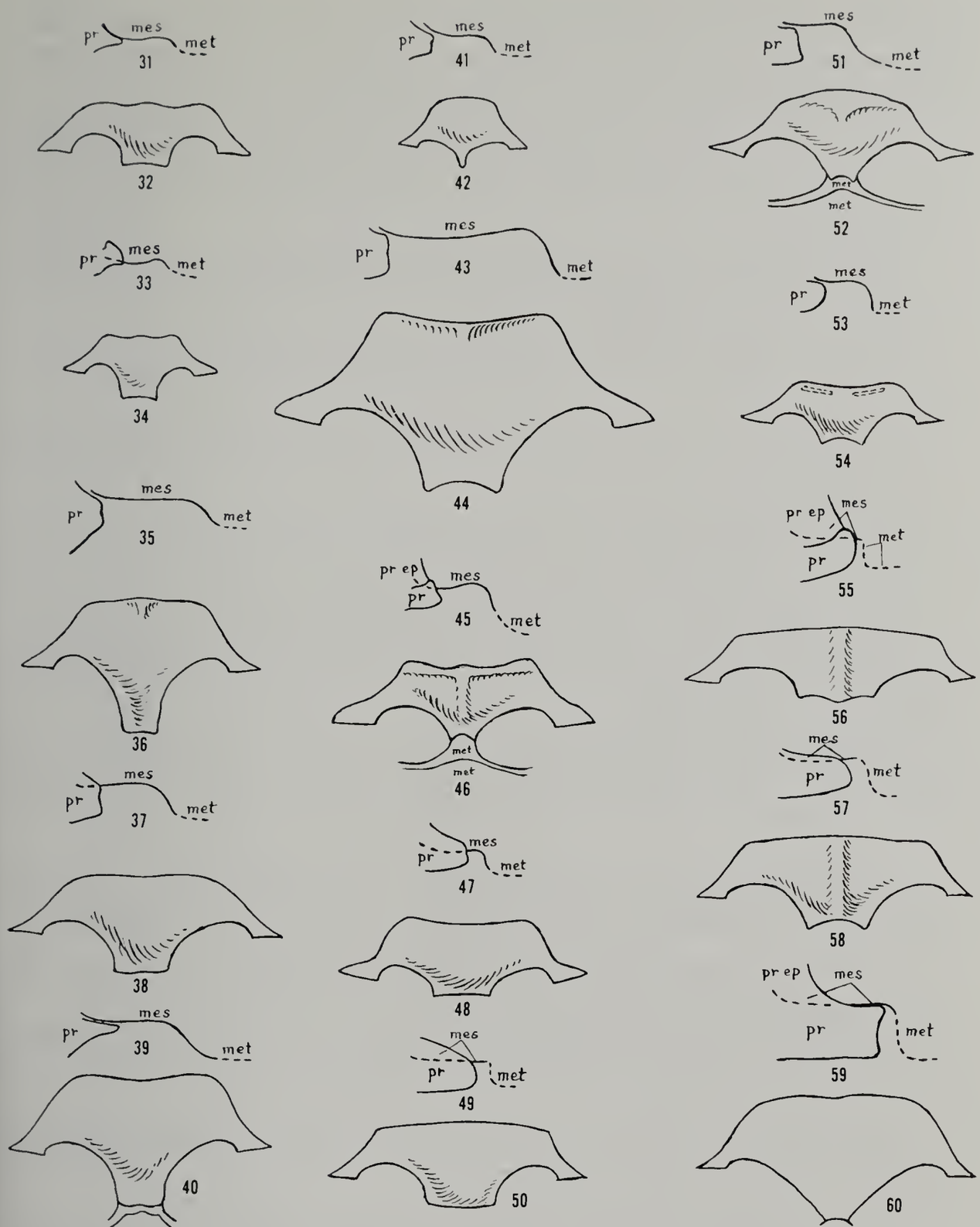

Fig. 31-60: Mesosternum in certain Nitidulidae. Odd numbers show the mesosternum in profile from the left side. Even numbers show ventral views of the mesosternum. Abbreviations as follows: mes—mesosternum, met—anterior part of the metasternum, pr—apical part of prosternal process, pr ep—prosternal episternum. 31,32) *Stelidota geminata.* 33,34) *Haptoncus luteolus.* 35,36) *Thalycra parsonsi.* 37,38) *Pocadius helvolus.* 39,40) *Aphenolia monogama.* 41,42) *Orthopeplus guadricollis.* 43,44) *Lasiodactylus pictus.* 45,46) *Pallodes pallidus.* 47,48) *Pocadites dilatimanus.* 49,50) *Pocadiodes vajdelota.* 51,52 *Cychramus adustus.* 53,54) *Xenostrongylus arcuatus.* 55,56) *Cyllodes ater.* 57,58) *Teichostethus guatemalenus.* 59,60) *Oxycnemus fulvus.*

Lobiopa (Fig. 5,6): Not carinate in *undulata* (Say), *falli* Pars., *setosa* Har., *brunnescens* Blatch., and *insularis* (Cast.) except that in some *setosa* and *insularis* there may be a short obsolete carina at the anterior margin. A small axillary space (Fig. 86) is present in the above species.

Soronia (Fig. 7,8): A very short obsolete carina may be absent or present at the anterior margin in the genotype *punctatissima* (Ill.), *guttulata* (Lec.), *grisea* (L.), *oblonga* Bris. The axillary space (Fig. 87) is very small or absent.

Ipidia (Fig. 9,10): Not carinate in the genotype *quadrimaculata* (Quensel), *sibirica* (Reit.), and *variolosa* Reit. There is a large axillary space (Fig. 88) in the above species.

Amphotis (Fig. 11,12): Not carinate in the genotype *marginata* (Fabr.) and *ulkei* Lec. There is a very small axillary space (Fig. 89) in the above species.

Trimenus (Fig. 13,14): Not carinate and no axillary space (Fig. 90) in *adpressus* Murr.

Camptodes (Fig. 15,16): There is a well developed carina which becomes broader posteriorly in *texanus* Schaef., *nigerrimus* Pars., and *gaumeri* Sharp. In the above 3 species the anterior fifth of the mesosternum is sharply elevated and an axillary space (Fig. 91) is present.

Aethina (Fig. 17,18): The carina is well developed in *aeneipennis* Reit. The axillary space (Fig. 92) is very large extending to the postero-lateral angle of the metasternum.

Psilopyga (Fig. 19,20): There is a well developed carina in the genotype *histrina* Lec., *nigripennis* Lec., *fasciata* Sharp, *latus* (Sporn.), and *lewisi* (Reit). The axillary space is well developed in the above species (Fig. 61-65, 93).

II. Mesosternum along median line on nearly the same plane as metasternium except that the posterior fourth is feebly elevated:

Phenolia (Fig. 21,22): Not carinate and a small axillary space (Fig. 94) in the genotype *grossa* (Fabr.).

Physosoronia (Fig. 23, 24): Not carinate and a small distinct axillary space (Fig. 95) in the genotype *explanata* Reit.

III. Mesosternum on median line horizontal along posterior half and obliquely elevated along anterior half:

Amphicrossus (Fig. 25-28): Bicarinate along anterior half in the genotype *ciliatus* (Oliv.), *horni* Sharp, *lateralis* Er., *limbatus* Sharp, *liebecki* (Pars.), and *niger* Horn. A small axillary space (Fig. 96,97) is present in the above species.

IV. Mesosternum along median line with posterior fifth to one-half obliquely and moderately elevated; the remaining anterior portion horizontal:

Epuraea (Fig. 29, 30): Not carinate. Apparently no axillary space is present except that at least in *avara* (Rand.) and *rufa* (Say) a very small axillary space is discernible (Fig. 98).

Stelidota (Fig. 31, 32): In the genotype *geminata* (Say), *octomaculata* (Say), *ferruginea* Er. (=*strigosa* of Horn (1879) and Parsons (1943) in error), *strigosa* Gyll. (=*strigosa* of Erichson, Reitter, and Sharp), *clavigera* Sharp, *chontalensis* Sharp, *solitaria* Sharp, and *multiguttata* Reit. the mesosternum is not carinate although very rarely a very fine carina may be seen. The axillary space (Fig. 99) is well developed.

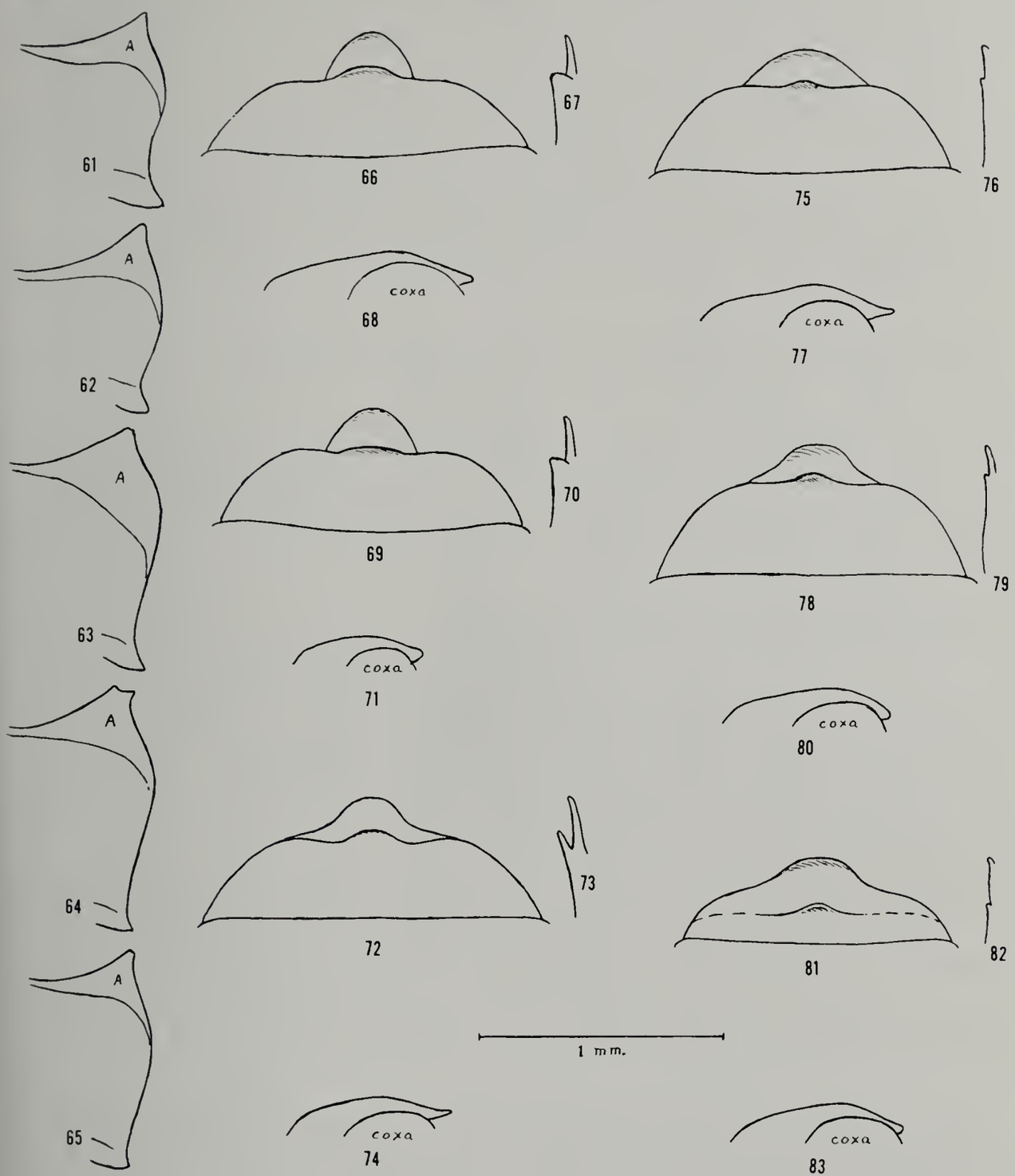

Fig. 61-65: Ventral views of left side of metasternum showing the axillary space [A]. 61) *Psilopyga fasciata.* 62) *Psilopyga* species A. 63) *Psilopyga histrina.* 64) *Psilopyga latus.* 65) *Psilopyga nigripennis.*
Fig. 66,69,72,75,78,81: ventral views of hypopygidia in *Amphicrossus.*
Fig. 67,70,73,76,79,82: lateral profiles of hypopygidia in *Amphicrossus.*
Fig. 68,71,74,77,80,83: lateral profiles of prosterna in *Amphicrossus.* 66-68) *Amphicrossus liebecki.* 69-71) *Amphicrossus niger.* 72-74) *Amphicrossus limbatus.* 75-77) *Amphicrossus ciliatus.* 78-80) *Amphicrossus horni.* 81-83) *Amphicrossus lateralis.*

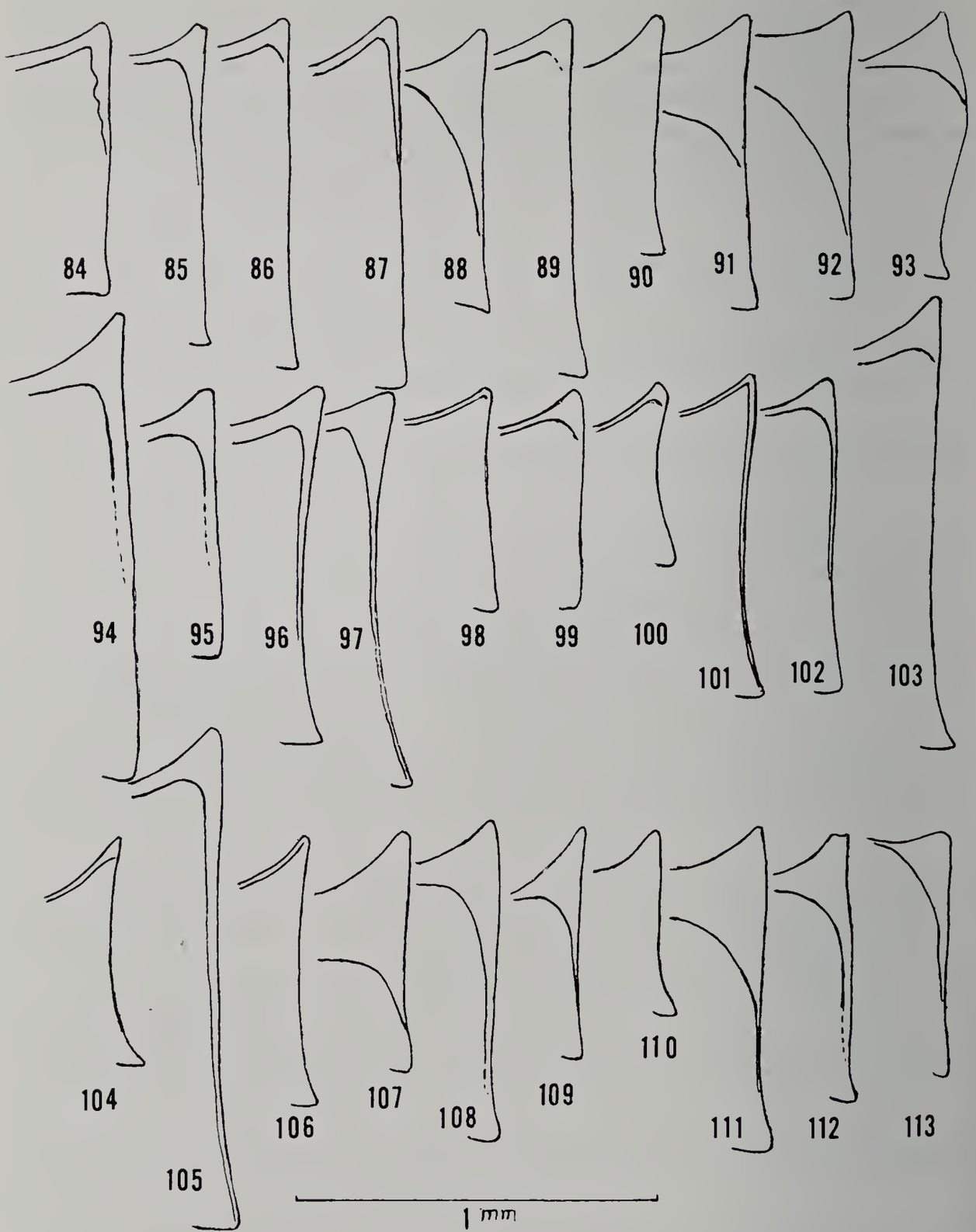

Fig. 84-113: Ventral view of left side of metasternum in certain Nitidulidae. When present the axillary space is shown. 84) *Omosita colon*, 85) *Nitidula bipunctata*, 86) *Lobiopa undulata*, 87) *Soronia guttulata*, 88) *Ipidia variolosa*, 89) *Amphotis ulkei*. 90) *Trimenus adpressus*, 91) *Camptodes texanus*, 92) *Aethina aeneipennis*, 93) *Psilopyga nigripennis*, 94) *Phenolia grossa*, 95) *Physosoronia explanata*, 96) *Amphicrossus ciliatus*, 97) *Amphicrossus liebecki*, 98) *Epuraea avara*, 99) *Stelidota geminata*, 100) *Haptoncus luteolus*, 101) *Thalycra parsonsi*, 102) *Pocadius helvolus*, 103) *Aphenolia monogama*, 104) *Orthopeplus quadricollis*, 105) *Lasiodactylus pictus*, 106) *Pallodes pallidus*, 107) *Pocadites dilatimanus*, 108) *Pocadiodes vajdelota*, 109) *Cychramus adustus*, 110) *Xenostrongylus arcuatus*, 111) *Cyllodes ater*, 112) *Teichostethus guatemalenus*, 113) *Oxycnemus mandibularis* (after Spornraft, not to same scale).

Haptoncus (Fig. 33, 34): In the genotype *ocularis* (Fairm.), *californicus* Gill., and *luteolus* (Er.) the mesosternum is not carinate and there is a small axillary space (Fig. 100).

Thalycra (Fig. 35,36): In the genotype *fervida* (Oliv.), *concolor* (Lec.), *murrayi* (Horn), *carolina* (Wick.), *sinuata* Howd., *mixta* Howd., *truncata* Howd., *dentata* Howd., *parsonsi* Howd., *acuta* Howd., *keltoni* Howd., and *monticola* Howd. there is an obsolete very short carina at the anterior margin, and the axillary space (Fig 101) is very much reduced but distinct.

Pocadius (Fig. 37,38): In the genotype *ferrugineus* (F.), *helvolus* Er., *fulvipennis* Er., *basalis* Schaef., and *niger* Pars. the mesosternum is not carinate and an axillary space (Fig. 102) is present.

Aphenolia (Fig. 39,40): In *monogama* (Crotch) the mesosternum is not carinate. As shown in Fig. 40 the anterior margin of the metasternum between the mesocoxae has a raised impunctate area. An axillary space is present (Fig. 103).

Orthopeplus (Fig. 41,42): In the genotype *quadricollis* Horn the mesosternum is not carinate and there is a very small axillary space (Fig. 104).

V. Mesosternum along median line strongly elevated and more or less covered by the prosternal process.

Lasiodactylus (Fig. 43,44): In *pictus* Macleay there is an obsolete very short carina at the anterior margin and there is a small axillary space (Fig. 105).

Pallodes (Fig. 45,46): In the genotype *pallidus* (Beauv.), *plateosus* Schaef., *mexicanus* Sharp, and *umbratilis* Reit. the mesosternum is carinate and there is no axillary space (Fig. 106).

Pocadites (Fig. 47,48): In *dilatimanus* Reit. the mesosternum is not carinate and there is a large axillary space (Fig. 107).

Pocadiodes (Fig. 49,50): In the genotype *vajdelota* (Wank.) the mesosternum is not carinate and there is a large axillary space (Fig. 108).

Cychramus (Fig. 51,52): In the genotype *luteus* (Fabr.) the carina is well developed, whereas in *adustus* Er. and *henoni* Fairm. the carina is slightly developed at anterior margin and absent in *variegatus* (Herbst). The axillary space is well developed in the above species (Fig. 109).

Atarphia (Not figured): In the genotype *fasciculata* Reit. the mesosternum is not carinate and there is a large axillary space.

Xenostrongylus (Fig. 53,54): In *arcuatus* Kiesw., *deyrollei* Jac. du Val, and *histrio* Woll. the mesosternum is not carinate and there is no axillary space (Fig. 110).

Cyllodes (Fig. 55,56): In the genotype *ater* (Herbst), *biplagiatus* Lec., and *binotatus* Reit. the mesosternum is carinate and strongly elevated but with the two posterior angles, between the mesocoxae, descending to the level of the metasternum. The axillary space (Fig. 111) is well developed in the above species.

Teichostethus (Fig. 57,58): In *guatemalenus* Sharp the mesosternum is carinate and strongly elevated but with the 2 posterior angles, between the mesocoxae, descending halfway to the level of the metasternum. The axillary space is well developed (Fig. 112).

Oxycnemus (Fig. 59,60): In the genotype *fulvus* Er., *rostrosus* Reit.,

and *nigriceps* Reit. the mesosternum is strongly elevated and not carinate. There is a well developed axillary space (Fig. 113).

Oxycnemus COMPARED WITH *Psilopyga*

This description of *Oxycnemus* is based on a male *fulvus* Er. from ?BRAZIL [B.M.], a male *rostrosus* Reit. from PANAMA: Chiriqui Prov., Bugaba [B.M.]. and a male *nigriceps* Reit. from VENEZUELA [LRG]. The description of *Psilopyga* is based on *histrina* Lec., *nigripennis* Lec., *fasciatus* Sharp, *latus* (Spornraft), and *lewisi*(Reit.).

Medium size (length 3.7-7.8mm), oval, convex, glabrous. Head short, clypeus moderately distinct, labrum distinctly bilobed but twice as deeply bilobed in *Psilopyga*. Antennae longer than head; 1st segment much enlarged, as long as 2nd and 3rd combined; segments 2-6 inclusive slender, 2nd as long as 3rd and 4th combined, 6th and 7th segments very short, 7th twice as wide as 6th and really forming part of the club, so the club can be said to be formed of 5 segments. But only the terminal 4 segments are pubescent, the remainder being glabrous. In *Psilopyga* the terminal 3 segments are densely pubescent and the club can be considered to be formed of 4 segments. Antennal grooves long, parallel, but much less distinct in *Psilopyga*. Mandibles apparently similar in the two genera except that they are very greatly enlarged in *Oxycnemus mandibularis* and *rostrosus*. Maxillary and labial palpi much longer and more slender in *rostrosus* than in *fulvus* which has longer palpi than *Psilopyga*. Mentum very feebly notched anteriorly in *fulvus*, distinctly notched in *rostrosus*, but in *Psilopyga* not at all notched and rounded (except feebly notched in 1 *nigripennis*).

Pronotum more strongly emarginate anteriorly than in *Psilopyga*, nearly as wide as elytra; pronotum posteriorly with short truncate lobe which is slightly narrower than scutellum. The scutellum is large, triangular, with lateral margins sinuate, whereas in *Psilopyga* the sides are not sinuate. Elytra with apices truncately rounded exposing most of the pygidium, epipleurae broad, attaining the apices, and pubescent; whereas in *Psilopyga* the epipleurae are glabrous.

Apex of prosternal process (Fig. 59) strongly elevated behind the procoxae and convex, whereas in *Psilopyga* the apex of the prosternal process (Fig. 19) is not elevated behind the procoxae and is depressed. Mesosternum (Fig. 60) not carinate but is strongly elevated, whereas in *Psilopyga* the mesosternum (Fig. 20) is carinate and on the same level with the metasternum. The inner margin of the metepisternum is nearly straight, whereas in *Psilopyga* it is distinctly sinuate. The eighth dorsal segment of the male is not visible dorsally, whereas it is clearly visible in *Psilopyga*. Male pygidium rounded and with raised margin, whereas in *Psilopyga* male pygidium is truncate to feebly emarginate and without raised margin. The tegmen is about equal in length to the median lobe, whereas in *Psilopyga* the tegmen is about twice as long as the median lobe (Spornraft 1971).

Oxycnemus Erichson

Oxycnemus Er., 1843, *in* Germar, Zeitschr. für Ent. 4:351.

Genotype: *Oxycnemus fulvus* Er.

Very recently Spornraft (1971) has revised *Oxycnemus*, recognizing *Psilopyga* as a subgenus. For reasons enumerated above I believe *Psilopyga* should receive generic rank. Arguments for its separation appear stronger than those for separating a number of genera in the nitidulids.

As here restricted this genus is Neotropical, including the following species from BRAZIL: *annulipes* Reit., *aterrimus* Reit., *mandibularis* Sporn., and *ruficollis* Grouv. plus *fulvus* Er. (Brazil to Panama), *nigriceps* Reit. (Brazil, Venezuela), *rostrosus* Reit. (Mexico to Panama), and *nigritus* Reit. from South America. But I have seen only *fulvus*, *nigriceps*, and *rostrosus*.

Psilopyga Leconte

Psilopyga Lec., 1853, Proc. Acad. Nat. Sci. Philadelphia 6:286.
Genotype: *Psilopyga histrina* Lec.

Eugoniopus Reit., 1884, Wiener Ent. Zeit. 3: 264, 267.
Genotype: *Eugoniopus lewisi* Reit.

It was Leconte (1883, p. 151) who made *Psilopyga* a synonym of *Oxycnemus*. Evidently he did not know the genotype of the latter. Sharp (1891) reinstated *Psilopyga* and made *Eugoniopus* a synonym of *Psilopyga*. Although Blatchley (1910) followed Sharp, Grouvelle (1913), Parsons (1943), and Gillogly (1965) followed Leconte.

As here restricted *Psilopyga* is Holarctic and Oriental, comprising 3 species from the eastern United States: *histrina* Lec., *nigripennis* Lec., and *latus* (Spornraft); plus *fasciatus* Sharp (Mexico and Arizona), *lewisi* (Reit.) (Japan), and *reitteri* (Grouv.) (Burma). I have not seen *reitteri*. The axillary space of *latus* as shown in Fig. 64 is deemed more correct than the one depicted by Spornraft (1971). Sadanari Hisamatsu (personal communication) writes that he has a "new Indian species belonging to *Psilopyga*".

There is an apparently undescribed species, designated Species A, represented by 1♂ from Patagonia, Arizona [LRG] and 1♂ from the Huachuca Mts., Arizona [KS]. It differs from *nigripennis* in being less oval, prothorax less emarginate and less narrowed anteriorly, in having a small pale humeral area on each elytron, and in a larger axillary space (Fig. 62).

Amphicrossus Erichson

Amphicrossus Er., 1843, *in* Germar, Zeit. für Ent. 4:346.
Genotype: *Nitidula ciliatus* Oliv.

The following account is a supplement to my previous papers (1939, 1943). Some additional characteristics of this genus are the bicarinate mesosternum and the unusual development of the male hypopygidium which appears to be composed of 2 coalesced sternites. This character offers a good method for differentiating species and so is figured below.

KEY TO NEW WORLD *Amphicrossus*

1. Oblong, width to length ratio: 1 to 1.8-2 or more, moderately convex, dark brown 2
1′. Oval, width to length ratio: 1 to ±1.5 (except 1 to ±1.8 in *niger* which is black); strongly convex, except moderately so in *niger* 3

2(1). Smaller, length 4.5-4.7mm; width to length ratio: 1 to 2+; no tubercles on elytra; male with shiny subquadrate lobe near middle of hypopygidium; male with pencil of setae on each elytron, before the middle (Argentina) .. *vicinus* Grouv.
2′. Larger, length 5.2-6.6mm; width to length ratio: 1 to 1.8; elytra with vague rows of obsolete setigerous tubercles; male with punctate rounded lobe about one-third from posterior margin of hypopygidium (Fig. 66). no pencil of setae on each elytron in the male (Arizona) ..... *liebecki* Pars.

3(1′). Color above unicolorous; lateral elytral fimbriae narrow, only as long as width of first antennal segment 4
3′. Color above fuscous with obscure pale markings; lateral elytral elytral fimbriae broad, noticeably longer at middle, at least twice as long as width of first antennal segment 5

4(3). Moderately convex; less oval than *limbatus*; black; punctures on disc of pronotum separated by 3 times their diameter; posterior margin of pronotum not bisinuate; no pencil of setae on elytron of male. Hypopygidium Fig. 69, 70; prosternum Fig. 71 ..... *niger* Horn
4′. Strongly convex; uniformly fuscous above; punctures on disc of pronotum much finer and separated by 4 or 5 times their diameters; posterior margin of pronotum distinctly bisinuate; male with pencil of setae on each elytron at or near the sutural margin. Hypopygidium Fig. 72, 73; prosternum Fig. 74 ..... *limbatus* Sharp

5(3′). Elytral fimbriae slightly longer at middle than at anterior or posterior third, being about twice as long as width of first antennal segment; pygidium shagreened; punctures on pronotum much more coarse. Hypopygidium Fig. 75, 76; prosternum Fig. 77 ..... *ciliatus* (Oliv.)
5′. Elytral fimbriae distinctly longer at midddle than at anterior or posterior third, being about 2½ times as long as width of first antennal segment. Pygidium not distinctly shagreened, more shining; punctures on pronotum finer, separated by 3 or 4 times their diameter 6

6(5′). Hypopygidium of male (Fig. 81,82) with a small, shiny, adpressed lobe about half way between anterior and posterior margins measured along middle; posterior margin of male hypopygidium more broadly rounded; prosternal

process in profile more elevated behind the procoxae (Fig. 83); a longitudinal dark band usually evident occupying about half the pygidial width (Brazil) ..... *lateralis* Er.

6'. Hypopygidium of male (Fig. 78,79) with a small, shiny, glabrous, adpressed lobe about one-third from the posterior margin, area posterior to the lobe feebly concave; posterior margin of male hypopygidium less broadly rounded; prosternal process in profile less elevated behind the procoxae (Fig. 80); pale markings of upper surface more obscure; dark band on pygidium not usually evident (Guatemala, Panama) ..... *horni* Sharp

Amphicrossus vicinus Grouvelle

Amphicrossus vicinus Grouvelle, 1916, Rev. Mus. La Plata 23:245-6.

I have not seen this species. It is based on a pair collected by Carlos Bruch in the Province of Buenos-Aires, Argentina and is in his collection at the Mus. Argent. Cienc. Nat. Bernard.

Amphicrossus liebecki (Parsons), NEW COMBINATION

(Fig. 27,28,66,67,68)

Epuraea liebecki Parsons, 1943, Bull. Mus. Comp. Zool 92:189.

With more material available this species is now redescribed. It is placed in *Amphicrossus* even though it has elytral tubercles and is more oblong and less convex than is usual in this genus. Also *A. niger* Horn is intermediate in convexity and outline between *liebecki* and the other New World species. The male hypopygidium shows a strong relationship to *niger*.

Unusually large, length 5.2-6.6mm, distinctly more depressed, more oblong than is usual in the genus; lateral margins of prothorax and elytra easily visible from above. Lateral fringe of hair much shorter than in *ciliatus*, about as long or slightly shorter than in *niger*. Color above dark fuscous, beneath pale fuscous including antennae and legs. Vertex with punctures separated by their diameters; larger punctures as large as eye facets. Prothorax with average length to width ratio: 1 to 1.82 (holotype: 1 to 1.74). Because the prothorax is partially deflexed, total length is not a significant figure. Therefore dimensions are given as follows: length of prothorax: holotype 1.9mm, average 1.82mm, range 1.6-2.1mm; width of prothorax: holotype 3.3mm, average 3.3mm, range 2.8-3.7mm; length of elytra: holotype 3.7mm, average 3.56mm, range 3.2-4.2mm; width of elytra: holotype 3.3mm, average 3.23 mm, range 2.9-3.7mm; Pronotal surface densely punctate, punctures separated by about their diameters, each puncture bearing a dark fulvous recumbent hair; intervals finely granulose. The sutural three-fifths of each elytron with about 7 vague rows of obsolete tubercles, each tubercle bearing a recumbent dark fulvous hair twice as long as the hairs borne by the punctures in between which are separated by about twice their diameters. Punctation of pronotum, elytra, and pygidium much denser than in *ciliatus* or *niger*. Male meso-

tibia feebly expanded on inner side at apex, whereas the male mesotibia of *niger* and *ciliatus* are simple.

This rare species is known from southern ARIZONA where it is usually collected at blacklight. Holotype male, state label, Liebeck coll. [MCZ]; paratype male, state label [CTP]; paratype male, Huachuca Mts., Carr Canyon, 14-VII-36, M. Cazier [AMNH]; male Patagonia Mts., west slope on Lochiel Rd., 5330 ft., mesquite-chaparral, 14-VII-48, F. Werner, W. Nutting [CTP]; female, Huachuca Mts., Ramsey Canyon, 5350 ft., 10-19-VI-66, F. Werner [U.A.]; male, female, Pajarito Mts., Pena Blanca Canyon, 11-VII-70, K. Stephan [KS]; male, Santa Rita Mts., Madera Canyon, 22-VI-68, K. Stephan [KS]; male, Santa Rita Mts., Madera Canyon, 9-VIII-61, F. Werner, W. Nutting [UA].

Amphicrossus niger Horn

(Fig. 69-71)

Amphicrossus niger Horn, 1879, Trans. Amer. Ent. Soc. 7:317.

This species occurs in southern ARIZONA in old wounds on mesquite trees.

Amphicrossus limbatus Sharp

(Fig. 72-74)

Amphicrossus limbatus Sharp, 1891, Biol. Centr.-Amer. 2(1):349.

This species is known by the male lectotype and female paralectotype from GUATEMALA: Alta Verapaz, Chiacam (male) and Teleman (female) [BM]. Examined. Also 9 specimens [USNM] from PANAMA: Canal Zone, Barro Colorado, June, July, Aug., Sept., 1937, 1942, James Zetek. Two were taken in a fruit fly trap.

In the writer's collection is a female which keys to *limbatus* but differs in having coarser punctation, as in *ciliatus*, and pygidium much less convex, as in *limbatus*. It was taken by F. Werner and W. Nutting in MEXICO: Guerrero, El Gavilan, 13 km. north of Taxco, 5300 ft., oak-pine scrub, 21-VI-48.

Amphicrossus ciliatus (Olivier)

(Fig. 75-77)

Nitidula ciliatus Olivier, 1811, Encycl. Meth. 8:210.

The type of this species "sur les ulcéres du *Liquidambar* en Caroline" could not be found on a recent visit to the Paris Museum. At Wheatly, Ontario, Karl Stephan collected it at sap of poplar on April 3, and at Edgewood Arsenal, Maryland, Alan Gillogly collected it at sap of chestnut oak in mid June. It ranges from Ontario to Florida west to Iowa, Missouri, and Texas (Dallas, Burnet). Also E. A. Schwarz took a specimen on Ceiba on Jan. 22 at Cayamas, CUBA [USNM]. My 1943 record for Old Panama is based on my misidentification of *horni*.

Amphicrossus lateralis Erichson

(Fig. 81-83)

Amphicrossus lateralis Er., 1843, *in* Germar, Zeit. für Ent. 4:348.

The type is from BRAZIL, Para (not examined). The British Museum has 6 specimens from BRAZIL: St. Paulo; Amaz[on]; Tejuca, 1-I-1857, H. Clark; St. Fe de Bogata, labelled "*Strongylium bispinosus* Dup."

This species is evidently closely related to *horni*. The lateral fimbriae, punctation, placement of male pencils of setae, posterior margin of pronotum are all as in *horni*.

Amphicrossus horni Sharp

(Fig. 78-80)

Amphicrossus horni Sharp, 1891, Biol. Centr.-Amer. 2(1):349.

Type material: a series from GUATEMALA: Alta Verapaz, Teleman and Chacoj, G. C. Champion [BM]; Suchitepéquez, San Isidro, 1600 ft., at sap, G. C. Champion [BM]. Examined. There are also 3 from PANAMA: Old Panama, 31-I-11, E. A. Schwarz [USNM] (2); Barro Colorado Island, 23-24-V-40, James Zetek [USNM] (1).

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